

Kaufman, Claire

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**From:** Kaufman, Claire  
**Sent:** Wednesday, August 13, 2003 10:50 AM  
**To:** STIC-Biotech/ChemLib  
**Subject:** sequence search 09/990,940

## SEQUENCE SEARCH REQUEST

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NAME: CLAIRE KAUFMAN    AU: 1646    MAILBOX: 10D19

SERIAL NUMBER: **09/990,940**    DATE: 8/13/03  
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Please search SEQ ID NO:17 and 18 and  
oligo search both 17 and 18 (I need 50 contiguous amino acids or 100 contiguous  
nucleotides). Please search in commercial and interference database.

Please put results on disk.

Thanks!

Claire Kaufman  
AU 1646, 305-5791

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AC      Q8BHH0; PRELIMINARY;          PRT;      365 AA
DT      01-MAR-2003 (TrEMBLrel. 23, Created)
DT      01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT      01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
5  DE      Hypothetical rhodopsin-like GPCR superfamily containing protein.
OS      Mus musculus (Mouse).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC      Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX      NCBI_TaxID=10090;
10  RN      [1]
RP      SEQUENCE FROM N.A.
RC      STRAIN=C57BL/6J; TISSUE=Dorsal root ganglion, and Head;
RX      MEDLINE=22354683; PubMed=12466851;
RA      The FANTOM Consortium,
15  RA      the RIKEN Genome Exploration Research Group Phase I & II Team;
RT      "Analysis of the mouse transcriptome based on functional annotation of
RT      60,770 full-length cDNAs.";
RL      Nature 420:563-573(2002).
DR      EMBL; AK048439; BAC33337.1; -.
20  DR      EMBL; AK051723; BAC34735.1; -.
KW      Hypothetical protein.
SQ      SEQUENCE      365 AA;  41759 MW;  1EB7E5369632ED56 CRC64;

      Query Match          88.2%;  Score 1905;  DB 11;  Length 365;
25  Best Local Similarity  100.0%;  Pred. No. 8.6e-160;
      Matches 365;  Conservative 0;  Mismatches 0;  Indels 0;  Gaps 0

Qy      52  MLIFALALFGNALVVYVTRSKAMRTVTNIFICSLALSDLLIVFFCIPVTMLQNVSDTWL 111
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
30  Db      1  MLIFALALFGNALVVYVTRSKAMRTVTNIFICSLALSDLLIVFFCIPVTMLQNVSDTWL 60

Qy      112 GGAFICKMVPFVQCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWL 171
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61  GGAFICKMVPFVQCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWL 120

35  Qy      172 AIIIGSPMWHVQRLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLLSV 231
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      121 AIIIGSPMWHVQRLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLLSV 180

40  Qy      232 LYGKIGYELWIKKRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFVAVCWAPFHIV 291
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      181 LYGKIGYELWIKKRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFVAVCWAPFHIV 240

Qy      292 HMMIEYSNFEKEYDEVTIKMIFAIVQIIGFFNSICNPPIIYALMNENFKKNFVSAVCYCIV 351
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
45  Db      241 HMMIEYSNFEKEYDEVTIKMIFAIVQIIGFFNSICNPPIIYALMNENFKKNFVSAVCYCIV 300

Qy      352 KETPSSARKHGSSGAMVMHRRAKLAARENPVEIKGEAFGGSNIDIKWCEQPEKKKRRSKV 411
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
50  Db      301 KETPSSARKHGSSGAMVMHRRAKLAARENPVEIKGEAFGGSNIDIKWCEQPEKKKRRSKV 360

Qy      412 ASCPL 416
      |||||
Db      361 ASCPL 365

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SEQUENCE COMPARISON A

AC AAB02853;  
XX  
DT 22-AUG-2000 (first entry)  
XX  
5 DE Human G protein coupled receptor hRUP4 (V272K) protein SEQ ID NO:128.  
XX  
KW Human; G protein coupled receptor; GPCR; transmembrane receptor;  
KW identification; agonist; screening; therapeutic; pharmaceutical;  
KW mutant.  
10 XX  
OS Homo sapiens.  
OS Synthetic.  
XX  
PN WO200022131-A2.  
15 XX  
PD 20-APR-2000.  
XX  
PF 13-OCT-1999; 99WO-US24065.  
XX  
20 PR 13-OCT-1998; 98US-0170496.  
PR 12-NOV-1998; 98US-0108029.  
PR 20-NOV-1998; 98US-0109213.  
PR 27-NOV-1998; 98US-0110060.  
PR 16-FEB-1999; 99US-0120416.  
25 PR 26-FEB-1999; 99US-0121852.  
PR 12-MAR-1999; 99US-0123944.  
PR 12-MAR-1999; 99US-0123945.  
PR 12-MAR-1999; 99US-0123946.  
PR 12-MAR-1999; 99US-0123948.  
30 PR 12-MAR-1999; 99US-0123949.  
PR 12-MAR-1999; 99US-0123951.  
PR 28-MAY-1999; 99US-0136436.  
PR 28-MAY-1999; 99US-0136437.  
PR 28-MAY-1999; 99US-0136439.  
35 PR 28-MAY-1999; 99US-0137127.  
PR 28-MAY-1999; 99US-0137131.  
PR 28-MAY-1999; 99US-0137567.  
PR 30-JUN-1999; 99US-0141448.  
PR 27-AUG-1999; 99US-0151114.  
40 PR 03-SEP-1999; 99US-0152524.  
PR 29-SEP-1999; 99US-0156633.  
PR 29-SEP-1999; 99US-0156555.  
PR 29-SEP-1999; 99US-0156634.  
XX  
45 PA (AREN-) ARENA PHARM INC.  
XX  
PI Behan DP, Lehmann-Bruinsma K, Chalmers DT, Chen R, Dang HT;  
PI Gore M, Liaw CW, Lin I, Lowitz K, White C;  
XX  
50 DR WPI; 2000-317986/27.  
DR N-PSDB; AAA46115.  
XX  
PT Non-endogenous, human G protein-coupled receptors for screening  
PT receptor, inverse or partial agonists useful as therapeutic agents -

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XX

PS Example 2; Page 164-166; 187pp; English.

XX

5 CC The present invention describes transmembrane receptors, preferably  
CC human G protein coupled receptors (GPCR), for which the endogenous  
CC ligand is unknown (orphan GPCR receptors). More specifically the present  
CC invention relates to non-endogenous, constitutively activated versions  
CC of a human GPCR. These non-endogenous human GPCRs can be useful for  
10 CC the direct identification of candidate compounds as receptors agonists,  
CC inverse agonists or partial agonists for use as pharmaceutical agents.  
CC AAA46017 to AAA46126 and AAB02825 to AAB02859 represent sequences used in  
CC the exemplification of the present invention.

XX

15 SQ Sequence 431 AA;

Query Match 81.4%; Score 1758; DB 21; Length 431;  
Best Local Similarity 79.7%; Pred. No. 1.2e-187;  
Matches 337; Conservative 37; Mismatches 39; Indels 10; Gaps  
3;

20

Qy 4 NLTAEQLSALLRLHNLTRAQFIAHYGLRPLVLTQPQPARARLALLLVGMLIFALALFGNA 63  
|:| || | ||| |||| | |||| | :|| | :|||:| :| |||||  
Db 5 NITPEQFSRLLRDHNLTREQFIALYRLRPLVYTPPELPGRAKLALVLTGVLIFALALFGNA 64

25

Qy 64 LVVYVWTRSKAMRTVTNIFICSIALSDLLIVFFCIPVTMLQNVSDTWLGGAFICKMVPFV 123  
|| ||||| ||||| ||||| ||||| ||||| :|| ||||| |||||  
Db 65 LVFYVWTRSKAMRTVTNIFICSIALSDLLITFFCIPVTMLQNISDNWLGGAFICKMVPFV 124

30

Qy 124 QCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPMWHVQ 183  
| ||:|||:||||| ||||| ||||:||||| |||||:|||||  
Db 125 QSTAVVTEMLTMTCIAVERHQGLVHPFKMKWQYTNRRRAFTMLGVVWLVAIVIGSPMWHVQ 184

35

Qy 184 RLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLSVLYGKIGYELWIK 243  
:||||| |||||:||||| |||||: |||||: |||||  
Db 185 QLEIKYDFLYEKEHICCLEEWTSPPVHQKIYTTFILVILFLLPLMVMLILYSKIGYELWIK 244

40

Qy 244 KRIGDGSVLRITIHGKEMFKIARKKKRAVIMMVTVVVLFVAVCWAPFHVHMMIEYSNFEKE 303  
||:||||| ||||| ||||| |||||:||||| |||||  
Db 245 KRVGDGSVLRITIHGKEMSKIARKKKRAKIMMVTVVALFVAVCWAPFHVHMMIEYSNFEKE 304

45

Qy 304 YDEVTIKMIFAIVQIIGFFNSICNPIIYALMNENFKKNFVSAVCYCIVKETPSSARKHGS 363  
||:||||| |||||: ||||| :||||| :| | |:|:  
Db 305 YDDVTIKMIFAIVQIIGFSNSICNPIVYAFMNENFKKNVLSAVCYCIVNKTFSPAQRHGN 364

50

Qy 364 SGAMVMHRRAKLAARENPV-EIKGEAFGGSNIDIKWCEQPEKKR-----RSKVA-S 413  
|| :| :||| : |||| | |||| | :||| ||| |:|: ||:| :  
Db 365 SGITMMRKKAKFSLRENVEETKGEAFSDGNIEVKLCEQTEKKKKLKRHLALFRSELAEN 424

Qy 414 CPL 416

||

Db 425 SPL 427

5

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30

F;372/Binding site: carbohydrate (Asn) (covalent) #status predicted

35

9;

40

Db 50 OVVLILAYCSIILLGVIGNSLVIHVVIKFKSMRTVTNFFIANLAVADLLVNTLCPLPFTLT 109

45

Db 110 YTLMG EWKMG PVLCHLVPYAQGLAVQVSTITLTVIALDRHRCIV--YHLESKISKRISFL 167

50

$$| \begin{array}{c} : \\ | \end{array} | \begin{array}{c} : \\ : \\ | \end{array} | \begin{array}{c} | \\ | \\ | \end{array} | \begin{array}{c} : \\ : \\ | \end{array} | \quad | \begin{array}{c} : \\ | \end{array} | \quad | \begin{array}{c} : \\ | \end{array} | \quad : \quad | \begin{array}{c} : \\ | \end{array} | \quad | \quad : : : : : | \begin{array}{c} : \\ | \end{array}$$

55

Qv 276 TVVVLFAVCWAPFHIVHMMIEYSNFE---KEYDEVTIKMIFAIVQIIGFFNSICNPIIYA 332

[illegible]

Db 272 CVVVVFAVSWLPLHAFQLAVDIDSQVLDLKEY-----KLIFTVFHIIAMCSTFANPLLYG 326

Qy 333 LMNENFKKNFVSA 345 8/9=88% identical

|| |::| |:||

5 Db 327 WMNSNYRKAFLSA 339

## SEQUENCE COMPARISON - C

5

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50

Qy 52 MLIFALALFGNALVVYVVTTRSKAMRTVTNIFICSLALSDDLIVFFCIPVTMLQNVSDTWL 111  
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

Db 1 MLIFALALFGNALVVYVTRSKAMRTVTNIFICSLALSDLLIVFFCIPVTMLQNVSDTWL 60

Qy            112 GGAFICKMVPFVQCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVLV 171  
| | | | |

Db 61 GGAFICKMVPFVOCTAIVTEILTMTCIAVERHOGLVHPFKMKROYTNORAF TMLGVVWL V 120

[illegible]

Db 121 AIIIGSPMWHVORLEIKYDFLYEKEHICCLEEWSSPVHOKIYTTFILVTFLPLLLSV 180

QY            232 LYGKIGYELWIKKRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFVAVCWAPFHIV 291  
| | | | |

Db 181 LYGKIGYELWIKKRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFAVCWAPFHIV 240

Qy            292 HMMIEYSNFEKEYDEVTIKMIFAIVQIIIGFFNSICNPIIIYALMNENFKKNFVSAVCYCIV 351  
| | | | |

Db 241 HMMIEYSNFEKEYDEVTIKMIFAIVOIIGFFNSICNPPIIYALMNENFKKNFVSAVCYCIV 300

Qy 352 KETPSSARKHGSSGAMVMHRRAKLAARENPVEIKGEAFGGSNIDIKWCEQPEKKKRRSKV 411

Db 301 KETPSSARKHGSSGAMVMHRRAKLAAREN PVEIKGEAFGGSNIDIKWCEOPEKKKRRSKV 360

Qy 412 ASCPL 416

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          |||||
Db      361 ASCPL 365

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11 CPL 115  
425 SPL 427

SEQUENCE COMPARISON - D

5

10 AC AAY71309;  
XX  
DT 02-NOV-2000 (first entry)  
XX  
DE Human orphan G protein-coupled receptor hRUP4.  
XX  
15 KW Human; orphan G protein-coupled receptor; GPCR; hRUP4; drug screening;  
KW transmembrane receptor; expressed sequence tag; EST; signal cascade.  
XX  
OS Homo sapiens.  
XX  
20 PN WO200031258-A2.  
XX  
PD 02-JUN-2000.  
XX  
PF 13-OCT-1999; 99WO-US23687.  
25 XX  
PR 20-NOV-1998; 98US-0109213.  
PR 16-FEB-1999; 99US-0120416.  
PR 26-FEB-1999; 99US-0121852.  
PR 12-MAR-1999; 99US-0123946.  
30 PR 12-MAR-1999; 99US-0123949.  
PR 28-MAY-1999; 99US-0136436.  
PR 28-MAY-1999; 99US-0136437.  
PR 28-MAY-1999; 99US-0136439.  
PR 28-MAY-1999; 99US-0136567.  
35 PR 28-MAY-1999; 99US-0137127.  
PR 28-MAY-1999; 99US-0137131.  
PR 29-JUN-1999; 99US-0141448.  
PR 29-SEP-1999; 99US-0156555.  
PR 29-SEP-1999; 99US-0156633.  
40 PR 29-SEP-1999; 99US-0156634.  
PR 29-SEP-1999; 99US-0156653.  
PR 01-OCT-1999; 99US-0157280.  
PR 01-OCT-1999; 99US-0157281.  
PR 01-OCT-1999; 99US-0157282.  
45 PR 01-OCT-1999; 99US-0157293.  
PR 01-OCT-1999; 99US-0157294.  
PR 12-OCT-1999; 99US-0416760.  
PR 12-OCT-1999; 99US-0417044.  
XX  
50 PA (AREN-) ARENA PHARM INC.  
XX  
PI Chen R, Dang HT, Liaw CW, Lin I;  
XX  
DR WPI; 2000-400068/34.



DR N-PSDB; AAD01136.

XX

XX

PS Claim 74; Page 89-91; 102pp; English.

XX

The present amino acid sequence is the hRUP4, an endogenous human orphan G protein-coupled receptor (GPCR). The full length hRUP4 cDNA was cloned by RT-PCR with human brain cDNA as template. The hRUP4 PCR fragment obtained was an alternatively spliced form of the EST (expressed sequence tag) clone AI307658. The orphan GPCR of the invention, like all GPCRs has seven transmembrane alpha helices with an extracellular N-terminus and an intracellular C-terminus. However, no endogenous ligands has yet been identified for the proteins of the invention. The orphan GPCRs may be used in the identification of their endogenous ligands, and to screen potential GPCR agonists and antagonists for use as pharmaceutical agents. The proteins may also be used in the study of GPCR-mediated signalling cascades, and to elucidate their precise role in normal and diseased human conditions. Nucleic acid encoding human orphan GPCRs may be used for tissue localisation expression analysis to provide information about their function in healthy and pathological states.

XX

SQ Sequence 431 AA;

Query Match 81.7%; Score 1764; DB 21; Length 431;  
Best Local Similarity 79.9%; Pred. No. 2.5e-188;  
Matches 338; Conservative 37; Mismatches 38; Indels 10; Gaps

3;

Qy 4 NLTAEQLSALLRLHNLTRAQFIAHYGLRPLVLTPQLPARARLALLLVGMLIFALALFGNA 63  
| : | | | | | | | | | | | | | | | | : | | : | | : | | | | | |  
Db 5 NITPEOFSRLLRDHNLTREOFIALYRLRPLVYTPELPGRAKLALVLTGVLI FALALFGNA 64

Qy 64 LVVYVWTRSKAMRTVTNIFICSLALSDLLIVFFCIPVTMLQNVS DTLGGAFICKMVPFV 123  
|| ||||||| : || |||||||

Db 65 LVEFYVWTRSKAMRTVTNIFICSLALSDLLITFFCIPVTMLONISDNWLGGAFICKMVPFV 124

Qy 124 QCTAIVTEILTMTTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPMWHVQ 183  
| ||:||:||:||||||| ||||| |||:|||||||:|:|||||  
Db 125 OSTAVVTEMLTMTTCIAVERHOGGLVHPFKMKWQYTNRRRAFTMLGVVWLVAIVIGSPMWHVQ 184

Qy 184 RLEIKYDFLYEKEHICCLEEWSSPVHQIYTTFFILVTLFLLPLLLLLSVLYGKIGYELWIK 243  
 :|||||:|||||:|:::| |  
 Db 185 QLEIKYDFLYEKEHICCLEEWTSPPVHQIYTTFFILVILFLLPLMVMLILYSKIGYELWIK 244

Qy 244 KRIGDGSVLRTHGKEMFKIARKKKRAVIMMVTVVVLFVAVCWAPFHIVHMMIEYSNFEKE 303  
||:|||||  
Db 245 KRVGDGSVLRTHGKEMSKIARKKKRAVIMMVTVVVLFVAVCWAPFHVHMMIEYSNFEKE 304

QY 304 YDEVTIKMI FAIVQII GFFNSICNPIIYALMNENFKKNFVSAVCYCI VKETPSSARKHGS 363  
||:||||| |||||:| ||||| :||||| :| | |:|:

Db 305 YDDVTIKMI FAIVQII GFSNSICNP IYAFMNENFKKNVLSAVCYCIVNKTFS PAQRHGN 364

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Qy 364 SGAMVMHRRRAKLAARENPV-EIKGEAFGGSNIDIKWCEQPEKKKR-----RSKVA-S 413  
|| :| ::|| : |||| | |||| ||::| || |::| : ||::| :  
Db 365 SGITMMRKKAKFSLRENPVETKGEAFSDGNIEVKLCEQTEKKKKLKRHLALFRSELAEN 424

5 Qy 414 CPL 416  
||  
Db 425 SPL 427

## SEQUENCE COMPARISON - B

Qy 218 LVTLFLLPLLLLSVLYGKIGYELW--IKKRIGDGSVLRITIHGKEMFKIARKKKRAVIMMV 275

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~~Page 13~~

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Db 224 LLILYVLPLGIISFSYTRI----WSKLKNHVSPGAANDHYH-----QRRQKTTKMLV 271

Qy 276 TVVVLFAVCWAPFHIVHMMIEYSNFE---KEYDEVTIKMIFAIVQIIGFFNSICNPIIYA 332

|||:||| | | | : :: : ||| | : || : || :: ||::|

5 Db 272 CVVVVFAVSWLPLHAFQLAVDIDSQVLDLKEY-----KLIFTVFHIIAMCSTFANPLLYG 326

Qy 333 LMNENFKKNFVSA 345 8/9=88% identical

|| |::| |::|

Db 327 WMNSNYRKAFLSA 339

10

Art Unit: 1646

AC AAY94993;  
XX  
DT 19-JUN-2000 (first entry)  
5 XX  
DE Human secreted protein vc38\_1, SEQ ID NO:26.  
XX  
KW Human; secreted protein; cancer; tumour; cardiovascular disorder;  
KW blood disorder; haemophilia; autoimmune disease; diabetes; inflammation;  
10 KW infection; fungal; bacterial; viral; HIV; allergy; arthritis;  
KW neurodegenerative disease; asthma; contraceptive.  
XX  
OS Homo sapiens.  
XX  
15 PN WO200011015-A1.  
XX  
PD 02-MAR-2000.  
XX  
PF 24-AUG-1999; 99WO-US19351.  
20 XX  
PR 24-AUG-1998; 98US-0097638.  
PR 24-AUG-1998; 98US-0097659.  
PR 09-SEP-1998; 98US-0099618.  
PR 28-SEP-1998; 98US-0102092.  
25 PR 25-NOV-1998; 98US-0109978.  
PR 23-DEC-1998; 98US-0113645.  
PR 23-DEC-1998; 98US-0113646.  
PR 23-AUG-1999; 99US-0379246.  
XX  
30 PA (ALPH-) ALPHAGENE INC.  
XX  
PI Valenzuela D, Yuan O, Hoffman H, Hall J, Rapiejko P;  
XX  
DR WPI; 2000-224657/19.  
35 XX  
PT New secreted or transmembrane proteins and polynucleotides encoding  
PT them, useful for treating neurodegenerative disorders, autoimmune  
PT diseases and cancer -  
XX  
40 PS Claim 35; Page 284-285; 357pp; English.  
XX  
CC The invention relates to 40 human secreted proteins (AAY94981-Y95020),  
CC and cDNA sequences encoding them (AAA23423-A23462). The secreted  
CC proteins of the invention include those that are thought to be only  
45 CC partially secreted, i.e., transmembrane proteins. The proteins of the  
CC invention may exhibit one or more activities selected from the following:  
CC cytokine activity; cell proliferation; differentiation; immune  
CC modulation; haematopoiesis regulation; tissue growth activity;  
CC activin/inhibin activity; chemotactic/chemokinetic activity; haemostatic  
50 CC and thrombolytic activity; anti-inflammatory activity; and tumour  
CC inhibition activity. The proteins may be administered to patients as  
CC vaccines, and the nucleotides may be used as part of a gene therapy

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CC regime. Diseases or conditions that may be treated using the proteins or  
CC nucleotides of the invention include autoimmune diseases; genetic  
CC disorders; haemophilia; cardiovascular diseases; cancer; bacterial,  
CC fungal and viral infections, especially HIV; multiple sclerosis;  
5 CC rheumatoid arthritis; pulmonary inflammation; Guillain-Barre syndrome;  
CC insulin dependent diabetes mellitus; and allergic reactions such as  
CC asthma and anaemia. They may also be used for treating wounds, burns,  
CC ulcers, osteoporosis, osteoarthritis, periodontal diseases, Alzheimer's  
CC disease, Parkinson's disease, Huntington's disease and amyotrophic  
10 CC lateral sclerosis (ALS). Proteins with activin/inhibin activity may  
CC additionally be useful as contraceptives. Nucleic acid sequences of the  
CC invention may be used in chromosome mapping, and as a source of  
CC diagnostic primers and probes. The present sequence represents one of the  
CC 40 proteins of the invention.

15 XX  
SQ Sequence 431 AA;

Query Match 81.8%; Score 1767; DB 21; Length 431;  
Best Local Similarity 80.1%; Pred. No. 1.2e-188;  
20 Matches 339; Conservative 36; Mismatches 38; Indels 10; Gaps  
3;

Qy	4	NLTAEQLSALLRLHNLTRAQFIAHYGLRPLVLTPQLPARARLALLLVGMLIFALALFGNA	63
		:                           :    :    :   :	
25 Db	5	NITPEQFSRLLRDHNLTREQFIALYRLRPLVYTPELPGRAKLALVLTGVLI FALALFGNA	64
Qy	64	LVVYVWTRSKAMRTVTNIFICSLALSDDLIVFFCIPVTMLQNVSDTWLGGAFICKMVPFV	123
30 Db	65	LVFYVWTRSKAMRTVTNIFICSLALSDDLITFFCIPVTMLQNISDNWLGGAFICKMVPFV	124
Qy	124	QCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPMWHVQ	183
		:	
Db	125	QSTAVVTEILTMTCIAVERHQGLVHPFKMKWQYTNRRRAFTMLGVVWLVAIVIGSPMWHVQ	184
35 Qy	184	RLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLLSVLYGKIGYELWIK	243
		:	
Db	185	QLEIKYDFLYEKEHICCLEEWTSPPVHQKIYTTFILVILFLLPLMVMLILYSKIGYELWIK	244
Qy	244	KRIGDGSVLRITIHGKEMFKIARKKKRAVIMMTVVVLFVAVCWAPFHVHMMIEYSNFEKE	303
40 Db	245	KRVGDGSVLRITIHGKEMSKIARKKKRAVIMMTVVVALFVAVCWAPFHVHMMIEYSNFEKE	304
Qy	304	YDEVTIKMIFAIVQIIGFFNSICNPIIYALMNNENFKKNFVSAVCYCIVKETPSSARKHGS	363
		:	
45 Db	305	YDDVTIKMIFAIVQIIGFSNSICNPIVYAFMNNENFKKNVLSAVCYCIVNKTFSQAQRHGN	364
Qy	364	SGAMVMHRRAKLAARENPV-EIKGEAFGGSNIDIKWCEQPEKKKR-----RSKVA-S	413
		:  :   :                 :       :  :   ::  :	
50 Db	365	SGITMMRKKAKFSLRENPEETKGEAFSDGNIEVKLCEQTEEKKKLKRHLALFRSELAEN	424
Qy	414	CPL	416
Db	425	SPL	427

AC Q9Z2D5;  
 5 DT 30-MAY-2000 (Rel. 39, Created)  
 DT 30-MAY-2000 (Rel. 39, Last sequence update)  
 DT 30-MAY-2000 (Rel. 39, Last annotation update)  
 DE Neuropeptide Y receptor type 2 (NPY2-R) (NPY-Y2 receptor).  
 GN NPY2R.  
 10 OS Cavia porcellus (Guinea pig).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.  
 OX NCBI\_TaxID=10141;  
 RN [1]  
 15 RP SEQUENCE FROM N.A.  
 RX MEDLINE=99017376; PubMed=9802390;  
 RA Sharma P.S., Holmberg S.K., Eriksson H., Beck-Sickinger A.G.,  
 RA Grundemar L., Larhammar D.;  
 RT "Cloning and functional expression of the guinea pig neuropeptide Y  
 20 RT Y2 receptor.";  
 RL Regul. Pept. 75:23-28(1998).  
 CC -!- FUNCTION: RECEPTOR FOR NEUROPEPTIDE Y AND PEPTIDE YY.  
 CC -!- SUBCELLULAR LOCATION: Integral membrane protein.  
 CC -!- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.  
 25 CC HIGHEST TO TACHYKININS RECEPTORS.  
 CC -----  
 CC -  
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 CC -----  
 CC -  
 DR EMBL; AF072821; AAD13143.1; -.  
 DR InterPro; IPR000276; GPCR\_Rhodpsn.  
 45 DR Pfam; PF00001; 7tm\_1; 1.  
 DR PRINTS; PR00237; GPCRRHODOPSN.  
 DR PROSITE; PS00237; G\_PROTEIN\_RECEP\_F1\_1; 1.  
 DR PROSITE; PS50262; G\_PROTEIN\_RECEP\_F1\_2; 1.  
 KW G-protein coupled receptor; Transmembrane; Glycoprotein;  
 50 KW Phosphorylation; Lipoprotein; Palmitate.

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5  FT   DOMAIN           1      50      EXTRACELLULAR (POTENTIAL).
   FT   TRANSMEM        51      73      1 (POTENTIAL).
   FT   DOMAIN          74      83      CYTOPLASMIC (POTENTIAL).
   FT   TRANSMEM        84     105      2 (POTENTIAL).
10  FT   DOMAIN        106     125      EXTRACELLULAR (POTENTIAL).
   FT   TRANSMEM       126     147      3 (POTENTIAL).
   FT   DOMAIN         148     167      CYTOPLASMIC (POTENTIAL).
   FT   TRANSMEM       168     188      4 (POTENTIAL).
   FT   DOMAIN         189     215      EXTRACELLULAR (POTENTIAL).
15  FT   TRANSMEM       216     241      5 (POTENTIAL).
   FT   DOMAIN         242     269      CYTOPLASMIC (POTENTIAL).
   FT   TRANSMEM       270     292      6 (POTENTIAL).
   FT   DOMAIN         293     305      EXTRACELLULAR (POTENTIAL).
   FT   TRANSMEM       306     329      7 (POTENTIAL).
20  FT   DOMAIN         330     381      CYTOPLASMIC (POTENTIAL).
   FT   CARBOHYD        11      11      N-LINKED (GLCNAC. . .) (POTENTIAL).
   FT   DISULFID        124     204      BY SIMILARITY.
   FT   LIPID           343     343      PALMITATE (POTENTIAL).
SQ   SEQUENCE        381 AA;  42342 MW;  D806B859A43ECACE CRC64;

20  Query Match                20.9%;  Score 452;  DB 1;  Length 381;
    Best Local Similarity    31.6%;  Pred. No. 4.5e-25;
    Matches    99;  Conservative    74;  Mismatches  106;  Indels    34;  Gaps
    9;

25  Qy           44  RLALLLVGMLIFALALFGNALVVYVVTRSKAMRTVTNIFICSLALSDLLIVFFCIPVTML 103
    | : | : |   |   | : ||: ||: || : | : || || | | : ||: || | :   | : | | :
Db           51  RVVLILAYCSIILLGVVGNLSLVHVVIKFKSMRTVTNFFIANLAVADLLVNTLCPLPFTLT 110

30  Qy          104  QNVSDTWLGGA FICKMVPFVQCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFT 163
    :   |   |   : | : || : |   | :   : | : | || : || : |   : :   : : | : |
Db          111  YTLMG EWKMGPVLCHLV PYAQGLAVQVSTVTLTVIALDRHRCIV--YHLDSKISKQNSFL 168

35  Qy          164  MLGVVWLVAIIIGSPM---WHVQRLEIKYDFLYEKEHICCLEEW---SSPVHQKIYTTFI 217
    : : : | : : : || :   : ||   ||   | : | | : |   : :   : | :
Db          169  IIGLAWGISALLASPLAIFREYSLIEIIPDF----EIVACTEKWPGEEKSIYGTVYSLSS 224

40  Qy          218  LVTFLFLLPLLLLSVLGYGKIGYELW--IKKRIGDGSVLRTHGKEMFKIARKKKRAVIMMV 275
    | : | : || | : || | : |   | : |   : |   |   : : : :   | : |
Db          225  LLILYVLPLGIISVSYVRI----WSKLNKHSVPGAANDHYH-----QRRQKTTKMLV 272

45  Qy          276  TVVVLFVAVCWAPFHIVHMMIEYSNFE---KEYDEVTIKMIFAIVQIIGFFNSICNPIIYA 332
    ||| : || | | |   : : :   |||   | : || : | |   : :   | : : |
Db          273  FVVVVFVAVSWLPLHAFQLAVDIDSQVLDLKEY-----KLIFTVFHIIAMCSTFANPLLYG 327

50  Qy          333  LMNENFKKNFVSA 345
    | | | : | | : | |
Db          328  WMNSNYRKAFLSA 340

ID   NY2R_BOVIN          STANDARD;          PRT;    384 AA.
AC   P79113;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   30-MAY-2000 (Rel. 39, Last annotation update)

```



Art Unit: 1646

DE Neuropeptide Y receptor type 2 (NPY2-R) (NPY-Y2 receptor).  
 GN NPY2R.  
 OS Bos taurus (Bovine).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 5 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;  
 OC Bovidae; Bovinae; Bos.  
 OX NCBI\_TaxID=9913;  
 RN [1]  
 RP SEQUENCE FROM N.A.  
 10 RA Ammar D.A., Kolakowski L.F. Jr., Eadie D.M., Wong D.J., Ma Y.Y.,  
 RA Yang-Feng T.L., Thompson D.A.;  
 RL Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.  
 CC -!- FUNCTION: RECEPTOR FOR NEUROPEPTIDE Y AND PEPTIDE YY.  
 CC -!- SUBCELLULAR LOCATION: Integral membrane protein.  
 15 CC -!- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.  
 CC HIGHEST TO TACHYKININS RECEPTORS.  
 CC -----  
 -  
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 CC -----  
 -  
 35 DR EMBL; U50144; AAB40600.1; -.  
 DR InterPro; IPR000276; GPCR\_Rhodpsn.  
 DR Pfam; PF00001; 7tm\_1; 1.  
 DR PRINTS; PR00237; GPCRRHODOPSN.  
 DR PROSITE; PS00237; G\_PROTEIN\_RECEP\_F1\_1; 1.  
 DR PROSITE; PS50262; G\_PROTEIN\_RECEP\_F1\_2; 1.  
 40 KW G-protein coupled receptor; Transmembrane; Glycoprotein;  
 KW Phosphorylation; Lipoprotein; Palmitate.  
 FT DOMAIN 1 52 EXTRACELLULAR (POTENTIAL).  
 FT TRANSMEM 53 75 1 (POTENTIAL).  
 FT DOMAIN 76 85 CYTOPLASMIC (POTENTIAL).  
 45 FT TRANSMEM 86 107 2 (POTENTIAL).  
 FT DOMAIN 108 127 EXTRACELLULAR (POTENTIAL).  
 FT TRANSMEM 128 149 3 (POTENTIAL).  
 FT DOMAIN 150 169 CYTOPLASMIC (POTENTIAL).  
 FT TRANSMEM 170 190 4 (POTENTIAL).  
 50 FT DOMAIN 191 217 EXTRACELLULAR (POTENTIAL).  
 FT TRANSMEM 218 243 5 (POTENTIAL).  
 FT DOMAIN 244 271 CYTOPLASMIC (POTENTIAL).  
 FT TRANSMEM 272 294 6 (POTENTIAL).  
 FT DOMAIN 295 307 EXTRACELLULAR (POTENTIAL).

FT	TRANSMEM	308	331	7 (POTENTIAL).
FT	DOMAIN	332	384	CYTOPLASMIC (POTENTIAL).
FT	CARBOHYD	13	13	N-LINKED (GLCNAC. . .) (POTENTIAL).
FT	DISULFID	126	206	BY SIMILARITY.
FT	LIPID	345	345	PALMITATE (POTENTIAL).
SO	SEQUENCE	384 AA;	42943 MW;	468D19CBA8F29681 CRC64;

Query Match 20.8%; Score 449; DB 1; Length 384;  
Best Local Similarity 31.6%; Pred. No. 7.4e-25;  
Matches 99; Conservative 74; Mismatches 106; Indels 34; Gaps

Db 53 QVVLILAYCSIILLGVIGNSLVIHVVIKFKSMRTVTNFFIANLAVADLLVNTLCCLPFTLT 112

Db 113 YTLMG EWKMGPVLCHLVPYAOG LAVOVSTITLT VIALDRHRCIV--YHLESKISKQISFL 170

Db 171 IIGLAWGVSALLASPLAIFREYSLIEIIPDF---EIVACTEKWPGECKGIYGTIYSLSS 226

Db 227 LLILYVLPLGIISFSYTRI----WSKLKNHVSPGAAHDHYH-----ORROKTTKMLV 274

Db 275 CVVVVFAVSWLPLHAFQLAVDIDSHVLDLKEY-----KLFTVFHIIAMCSTFANPLLYG 329

Db 330 WMNSNYRKAFLSA 342

neuropeptide Y/peptide YY receptor Y2 - human  
N;Alternate names: neuropeptide y/peptide YY receptor type 2  
C;Species: Homo sapiens (man)  
C;Date: 01-Mar-1996 #sequence\_revision 01-Mar-1996 #text\_change 20-Apr-2000  
C;Accession: I39187; I39163; G02301  
R;Gerald, C.; Walker, M.W.; Vaysse, P.J.  
J. Biol. Chem. 270, 26758-26761, 1995  
A;Title: Expression cloning and pharmacological characterization of a human  
hippocampal neuropeptide Y/peptide YY Y2 receptor subtype.  
A;Reference number: I39187; MUID:96070760; PMID:7592910  
A;Accession: I39187  
A;Status: preliminary  
A;Molecule type: mRNA  
A;Residues: 1-381 <GER>  
A;Cross-references: EMBL:U36269; NID:g1063633; PIDN:AAC50281.1; PID:g1063634  
R;Rose, P.M.; Fernandes, P.; Lynch, J.S.; Frazier, S.T.; Fisher, S.M.;  
Kodukula, K.; Kienzle, B.; Seethala, R.

Art Unit: 1646

; Patent No. 5989834  
; GENERAL INFORMATION:  
; APPLICANT: Synaptic Pharmaceutical Corporation  
; TITLE OF INVENTION: NUCLEIC ACID ENCODING NEUROPEPTIDE  
5 ; TITLE OF INVENTION: Y/PEPTIDE YY (Y2) RECEPTORS AND USES THEREOF  
; NUMBER OF SEQUENCES: 27  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Cooper & Dunham LLP  
; STREET: 1185 Avenue of the Americas  
10 ; CITY: New York  
; STATE: New York  
; COUNTRY: U.S.A.  
; ZIP: 10036  
; COMPUTER READABLE FORM:  
15 ; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA:  
20 ; APPLICATION NUMBER: US/08/687,355A  
; FILING DATE: No. 5989834ember 26, 1996  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: White, John P.  
25 ; REGISTRATION NUMBER: 28,678  
; REFERENCE/DOCKET NUMBER: 44742-A-PCT/JPW/MAT  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 212-278-0400  
; TELEFAX: 212-391-0525  
30 ; INFORMATION FOR SEQ ID NO: 6:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 381 amino acids  
; TYPE: amino acid  
; TOPOLOGY: linear  
35 ; MOLECULE TYPE: protein  
US-08-687-355A-6

Query Match 21.1%; Score 454.5; DB 2; Length 381;  
Best Local Similarity 30.1%; Pred. No. 3.7e-33;  
40 Matches 104; Conservative 75; Mismatches 119; Indels 47; Gaps  
10;

Qy 25 IAHYGLRPLVLTPQLP-----ARARLALLVGMLIFALALFGNALVVYVTR 71  
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45 Db 18 VEFYGSPTTPRGELPPDPEPELIDSTKLVEVQVVLILAYCSIILLGVVGNLSLVIHVVIK 77  
  
Qy 72 SKAMRTVTNIFICSLLSDLLIVFFCIPVTMLQNVSDTWLGGAFICKMVPFVQCTAIVTE 131  
|: ||||| || :||: ||: | : | : | : | :  
Db 78 FKSMTVTNFFIANLAVADLLVNTLCPLFTLTITLMGEWKMGFVLCHLVPYAQGLAVQVS 137  
50  
Qy 132 ILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPM---WHVQRLEIK 188  
: | : | ||: ||: : | : : : | : : | : : || : ||  
Db 138 TITLTVIALDRHRCIV--YHLESKISKQISFLIIGLAWGVSALLASPLAIFREYSLIEII 195

Art Unit: 1646

Qy 189 YDFLYEKEHICCLEEW---SSPVHQKIYTTFILVTLFLLPLLLLSVLYGKIGYELW--IK 243  
|| | : | | : | | : : | : | : | : | : | : | : |

Db 196 PDF----EIVACTEKWPGEESVYGTVYSLSTLLILYVLPLGIISFSYTRI----WSKLK 247

5 Qy 244 KRIGDGSVLRTHGKEMFKIARKKKRAVIMMVTVVVLFVAVCWAPFHIVHMMIEYSNFE-- 301  
: | : | : : : | : | | : | | | : : : :

Db 248 NHVSPGAASDHYH-----QRRHKMTKMLVCVVVFAVSWLPLHAFQLAVDIDSHVLD 299

Qy 302 -KEYDEVTIKMIFAIVQIIGFFNSICNPIIYALMNENFKKNFVSA 345

10 ||| | : | : | : : | : : | | | : : | | : | |

Db 300 LKEY-----KLIFTVFHIIAMCSTFANPLLYGWMNSNYRKAFLSA 339

Art Unit: 1646

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; Sequence 2, Application US/09899532
; Patent No. US20020048791A1
; GENERAL INFORMATION:
5 ; APPLICANT: Bloomquist, Brian T.
; APPLICANT: Zhelnin, Leonid
; TITLE OF INVENTION: Human Neuropeptide Y-Like G
; TITLE OF INVENTION: Protein-Coupled Receptor
; FILE REFERENCE: 02973.00040
10 ; CURRENT APPLICATION NUMBER: US/09/899,532
; CURRENT FILING DATE: 2001-07-06
; PRIOR APPLICATION NUMBER: US 60/216,523
; PRIOR FILING DATE: 2000-07-06
; NUMBER OF SEQ ID NOS: 3
15 ; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 431
; TYPE: PRT
; ORGANISM: Homo sapiens
20 US-09-899-532-2

Query Match      81.8%; Score 1767; DB 9; Length 431;
Best Local Similarity 80.1%; Pred. No. 7.3e-156;
Matches 339; Conservative 36; Mismatches 38; Indels 10; Gaps
25 3;

Qy      4 NLTAEQLSALLRLHNLTRAQFIAHYGLRPLVLTTPQLPARARLALLLVGMLIFALALFGNA 63
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Db      5 NITPEQFSRLLRDHNLTREQFIALYRLRPLVYTPELPGRAKLALVLTGVLI FALALFGNA 64
30 Qy      64 LVVYVVTRSKAMRTVTNIFICSLALSDLLIVFFCIPVTMLQNVSDTWLGGAFICKMVPFV 123
      || ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      65 LVFYVVTRSKAMRTVTNIFICSLALSDLLITFFCIPVTMLQNISDNWLGGAFICKMVPFV 124
35 Qy      124 QCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPMWHVQ 183
      | ||:| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      125 QSTAVVTEILTMTCIAVERHQGLVHPFKMKWQYTNRRRAFTMLGVVWLVAIVIGSPMWHVQ 184
40 Qy      184 RLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFILVTLFLLPLLLLSVLYGKIGYELWIK 243
      :||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      185 QLEIKYDFLYEKEHICCLEEWTSPPVHQKIYTTFILVILFLLPLMVMLILYSKIGYELWIK 244
45 Qy      244 KRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFVAVCWAPFHIVHMMIEYSNFEKE 303
      ||:| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      245 KRVGDGSVLRTIHGKEMSKIARKKKRAVIMMVTVVALFVAVCWAPFHVHMMIEYSNFEKE 304
50 Qy      304 YDEVTIKMIFAIVQIIGFFNSICNP IYALMNENFKKNFVSAVCYCIVKETPSSARKHGS 363
      ||:| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      305 YDDVTIKMIFAIVQIIGFSNSICNP IYAFMNENFKKNVLSAVCYCIVNKTFSQAQRHGN 364
Qy      364 SGAMVMHRRAKLAARENPV-EIKGEAFGGSNIDIKWCEQPEKKKR-----RSKVA-S 413
      || :| :||| : |||| | |||| | ||:| ||| |:||| |:||| :
Db      365 SGITMMRKKA KFSLRNPVEETKGEAFSDGNIEVKLCEQTEEKKKKLKRHLALFRSELAEN 424
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Art Unit: 1646

Db 65 LVFYVWTRSKAMRTVTNIFICSLALSDDLITFFCIPVTMLQNISDNWLGGAFICKMVPFV 124

Qy 124 QCTAIVTEILTMTCIAVERHQGLVHPFKMKRQYTNQRAFTMLGVVWLVAIIIGSPMWHVQ 183  
| | : | | : | | | | | | | | | | | | | | | | | : | | | | | | | | : | | | | | |

5 Db 125 QSTAVVTEMLTMTCIAVERHQGLVHPFKMKWQYTNRRRAFTMLGVVWLVAIVIGSPMWHVQ 184

Qy 184 RLEIKYDFLYEKEHICCLEEWSSPVHQKIYTTFFILVTLFLLPLLLLSVLYGKIGYELWIK 243  
: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

10 Db 185 QLEIKYDFLYEKEHICCLEEWTSPPVHQKIYTTFFILVILFLLPLMVMLILYSKIGYELWIK 244

Qy 244 KRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLEFAVCWAPFHIVHMMIEYSNFEKE 303  
| | : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Db 245 KRVGDGSVLRTIHGKEMSKIARKKKRAVIMMVTVVALFAVCWAPFHVHMMIEYSNFEKE 304

15 Qy 304 YDEVTIKMIFAIVQIIGFFNSICNPPIYALMNENFKKNFVSACVYCIVKETPSSARKHGS 363  
| | : | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Db 305 YDDVTIKMIFAIVQIIGFSNSICNPVYAFMNENFKKNVLSACVYCIVNKTFSPAQRHGN 364

Qy 364 SGAMVMHRRAKLAARENPV-EIKGEAFGGSNIDIKWCEQPEKKKR-----RSKVA-S 413  
| | : | : | | : | | | | | | | | | | | | | | | | | | | | | | | | | | | |

20 Db 365 SGITMMRKKAKFSLRENPEETKGEAFSDGNIEVKLCEQTEEEKKKLKRHLALFRSELAEN 424

Qy 414 CPL 416  
| |

25 Db 425 SPL 427

LOCUS AK048439 2864 bp mRNA linear HTC 05-DEC-2002

30 DEFINITION Mus musculus 16 days embryo head cDNA, RIKEN full-length enriched library, clone:C130060K24 product:hypothetical Rhodopsin-like GPCR superfamily containing protein, full insert sequence.

ACCESSION AK048439

VERSION AK048439.1 GI:26339331

35 KEYWORDS HTC; CAP trapper.

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

40 REFERENCE 1

AUTHORS Carninci,P. and Hayashizaki,Y.

TITLE High-efficiency full-length cDNA cloning

JOURNAL Meth. Enzymol. 303, 19-44 (1999)

MEDLINE 99279253

45 PUBMED 10349636

REFERENCE 2

AUTHORS Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.

TITLE Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new

50 genes

JOURNAL Genome Res. 10 (10), 1617-1630 (2000)

Art Unit: 1646

MEDLINE 20499374  
PUBMED 11042159  
REFERENCE 3  
AUTHORS Shibata,K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N.,  
5 Carninci,P.,  
Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M.,  
Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A.,  
Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K.,  
10 Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M.,  
Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S.,  
Kawai,J.,  
Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y.  
TITLE RIKEN integrated sequence analysis (RISA) system--384-format  
sequencing pipeline with 384 multicapillary sequencer  
15 JOURNAL Genome Res. 10 (11), 1757-1771 (2000)  
MEDLINE 20530913  
PUBMED 11076861  
REFERENCE 4  
AUTHORS Kawai,J., Shinagawa,A., Shibata,K., Yoshino,M., Itoh,M., Ishii,Y.,  
20 Arakawa,T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,  
Aizawa,K., Izawa,M., Nishi,K., Kiyosawa,H., Kondo,S., Yamanaka,I.,  
Saito,T., Okazaki,Y., Gojobori,T., Bono,H., Kasukawa,T., Saito,R.,  
Kadota,K., Matsuda,H., Ashburner,M., Batalov,S., Casavant,T.,  
25 Fleischmann,W., Gaasterland,T., Gissi,C., King,B., Kochiwa,H.,  
Kuehl,P., Lewis,S., Matsuo,Y., Nikaido,I., Pesole,G.,  
Quackenbush,J., Schriml,L.M., Staubli,F., Suzuki,R., Tomita,M.,  
Wagner,L., Washio,T., Sakai,K., Okido,T., Furuno,M., Aono,H.,  
Baldarelli,R., Barsh,G., Blake,J., Boffelli,D., Bojunga,N.,  
30 Carninci,P., de Bonaldo,M.F., Brownstein,M.J., Bult,C.,  
Fletcher,C., Fujita,M., Gariboldi,M., Gustincich,S., Hill,D.,  
Hofmann,M., Hume,D.A., Kamiya,M., Lee,N.H., Lyons,P.,  
Marchionni,L., Mashima,J., Mazzearelli,J., Mombaerts,P.,  
Nordone,P.,  
35 Ring,B., Ringwald,M., Rodriguez,I., Sakamoto,N., Sasaki,H.,  
Sato,K., Schonbach,C., Seya,T., Shibata,Y., Storch,K.F.,  
Suzuki,H.,  
Toyo-oka,K., Wang,K.H., Weitz,C., Whittaker,C., Wilming,L.,  
Wynshaw-Boris,A., Yoshida,K., Hasegawa,Y., Kawaji,H., Kohtsuki,S.  
and Hayashizaki,Y.  
40 TITLE Functional annotation of a full-length mouse cDNA collection  
JOURNAL Nature 409 (6821), 685-690 (2001)  
MEDLINE 21085660  
PUBMED 11217851  
REFERENCE 5  
45 AUTHORS The FANTOM Consortium and the RIKEN Genome Exploration Research  
Group Phase I & II Team.  
TITLE Analysis of the mouse transcriptome based on functional annotation  
of 60,770 full-length cDNAs  
JOURNAL Nature 420, 563-573 (2002)  
50 REFERENCE 6 (bases 1 to 2864)  
AUTHORS Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Bono,H.,  
Carninci,P.,  
Fukuda,S., Furuno,M., Hanagaki,T., Hara,A., Hashizume,W.,  
Hayashida,K., Hayatsu,N., Hiramoto,K., Hiraoka,T., Hirozane,T.,



Art Unit: 1646

Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T.,  
Kato, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M.,  
Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,  
Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N.,  
5 Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N.,  
Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,  
Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S.,  
Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.,  
Muramatsu, M. and Hayashizaki, Y.

10 TITLE Direct Submission  
JOURNAL Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of  
Physical and Chemical Research (RIKEN), Laboratory for Genome  
Exploration Research Group, RIKEN Genomic Sciences Center (GSC),  
RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku,  
15 Yokohama,  
Kanagawa 230-0045, Japan (E-mail: genome-res@gsc.riken.go.jp,  
URL: <http://genome.gsc.riken.go.jp/>, Tel: 81-45-503-9222,  
Fax: 81-45-503-9216)

20 COMMENT cDNA library was prepared and sequenced in Mouse Genome  
Encyclopedia Project of Genome Exploration Research Group in Riken  
Genomic Sciences Center and Genome Science Laboratory in RIKEN.  
Division of Experimental Animal Research in Riken contributed to  
prepare mouse tissues.  
Please visit our web site for further details.  
25 URL: <http://genome.gsc.riken.go.jp/>  
URL: <http://fantom.gsc.riken.go.jp/>.

FEATURES Location/Qualifiers  
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30 /organism="Mus musculus"  
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BASE COUNT	839 a	609 c	602 g	814 t
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US-10-272-983-38

; Publication No. US20030148450A1

; APPLICANT: Chen, Ruoping

; APPLICANT: Dang, Huong T.

APPLICANT: Liaw, Chen W.

; APPLICANT: Lin, I-Lin

; TITLE OF INVENTION: Human Orphan G Protein Coupled Receptors

FILE REFERENCE: AREN0050

; CURRENT APPLICATION NUMBER: US/10/272,983

; CURRENT FILING DATE: 2002-10-17

; PRIOR APPLICATION NUMBER: US/09/417,044

; PRIOR FILING DATE: 1999-10-12

10 PRIOR APPLICATION NUMBER: 60/109,213

; PRIOR FILING DATE: 1998-11-20

; PRIOR APPLICATION NUMBER: 60/120,416

; PRIOR FILING DATE: 1999-02-16

; PRIOR APPLICATION NUMBER: 60/121,851

; PRIOR FILING DATE: 1999-02-26

; PRIOR APPLICATION NUMBER: 60/123,946

; PRIOR FILING DATE: 1999-03-12

; PRIOR APPLICATION NUMBER: 60/123,949

; PRIOR FILING DATE: 1999-03-12

PRIOR APPLICATION NUMBER: 60/136,436

; PRIOR FILING DATE: 1999-05-28

; PRIOR APPLICATION NUMBER: 60/136,437

; PRIOR FILING DATE: 1999-05-28

: PRIOR APPLICATION NUMBER: 60/136,439

; PRIOR FILING DATE: 1999-05-28

; PRIOR APPLICATION NUMBER: 60/136,567

; PRIOR FILING DATE: 1999-05-28

; Remaining Prior Application data removed - See File Wrapper or PALM.

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10	Db	185	QLEIKYDFLYEKEHICCLEEWTSPVHQKIYTTFFILVILFLLPLMVMLILYISKIGYELWIK	244
	Qy	244	KRIGDGSVLRTIHGKEMFKIARKKKRAVIMMVTVVVLFVAVCWAPFHIVHMMIEYSNFEKE	303
	Db	245	KRVGDGSVLRTIHGKEMSKIARKKKRAVIMMVTVVALFVAVCWAPFHVHMMIEYSNFEKE	304
	Qy	304	YDEVTIKMIFAIVQIIGFFNSICNPIIYALMNENFKKNFVSAVCYCIVKETPSSARKHGS	363
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	Qy	414	CPL	416
25	Db	425	SPL	427